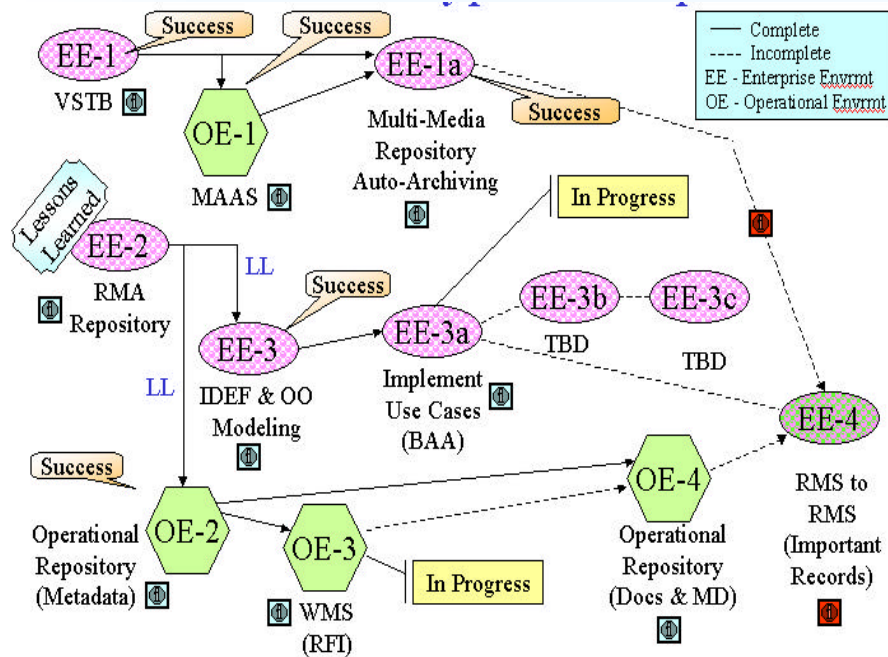


# Add'l DITT Projects -- HIS



DITT Core Prototyping

Technology

3M Lexicon  
Health  
Information  
Services (HIS)

NIMA

Electronic  
Recordkeeping  
Archives

NARA

IDEF & OO  
Modeling

**3M** Innovation



# NML Lexicon Project

*3M Health Information Systems*

*Innovation  
Innovation  
Innovation  
Innovation  
Innovation  
Innovation  
Innovation*



**3M** *Innovation*

3M\_Lexicon.ppt

# Project Structure

- Research terminology on the Web
- Pick non-medical domains with available terminology to build prototype with
- Load an HDD-like database with domain terminologies
- Build a Web-based prototype to facilitate human interoperability (understanding) with foreign sites
- Test the prototype

# Prototype

- The essence of interoperability is understanding
  - An automated system must be able to translate unknown terminology and metadata into known terminology and metadata
  - As well, for human understanding to occur a user must have a way to translate unknown terminology and metadata into known terminology and metadata
- We built a Web-based tool which would aid a user to gain understanding by allowing them to translate unknown terminology into (hopefully) more understandable terminology



# Prototype (cont.)

- Tool attributes:

- User enters URL for an HTML page to understand
- Tool finds terms in page and returns the page instrumented to be able to choose any term for searching
- User selects some set of unknown terms for searching
- More tools are called with these terms
- The **CALL/USGS “HDD”** database is searched for these terms (any part of them) which are returned to the user
- User can select a “known” term for further analysis or call AltaVista with the term
- If the user wishes further analysis, the tool will show all relationships with the term in the database
- Each relationship term can, in turn, be clicked to show its relationships or call AltaVista with the term

## Prototype (cont.)

- With a URL for an HTML file on Bosnia-Herzegovina, one could get the following (next slide) response from the tool:
- As terms are chosen, they are added to the lookup window
- When enough terms are chosen, pressing “lookup” will search the database for the terms

# Conclusions

- Terminology and metadata are key to understanding and interoperability
- Terminology and metadata is becoming more available on the Web but only slightly
- Our tool aids a user to gain understanding by discovering the meaning of lexicon through definition and terminology relationships
- It is difficult to collect terminology, place it into formal patterns, maintain it, and employ it in an automated fashion
- We believe the Web will become the source of most if not all business and personal information processing; for this to occur in an automated fashion, formal terminology must be defined for the processing domains and translations (relationships) between domains created

# Conclusions

- We have shown that there are overlaps between domain terminology (e.g., CALL and USGS); given this relationships between domains must be carefully defined for generalized interoperability to occur in an automated fashion
- We have shown that the 3M Health Information Systems Health Data Dictionary (HDD) technology can be employed in domains other than medicine and still be a useful and worthwhile tool and technology

DITT Prototyping Complete